



# Blood pressure and your brain

When you think of the effects of high blood pressure, you probably think of heart attack and stroke. And for good reason—many patients with high blood pressure develop coronary artery disease or heart failure, and many die as a result. But all parts of the body depend on the circulation, and many organs suffer from the impact of untreated high blood pressure. One of the organs at greatest risk is the brain.

## High pressure, short memory

A variety of illnesses and medications can contribute to memory loss—and as research continues to come in, it's increasingly clear that high blood pressure takes a toll on the aging brain.

Mild cognitive impairment can be a problem, but it's usually quite manageable. But severe memory loss is a disaster; it causes severe disturbances of memory, reasoning, and judgment.

The details vary from study to study, but the weight of evidence now suggests that high blood pressure increases the risk of mild cognitive impairment, a type of dementia called vascular dementia, and even Alzheimer's disease. Both high systolic (the top number of a blood pressure reading) pressure and high diastolic (the bottom number) pressure take a toll. In general, the higher the pressure and the longer it persists without treatment, the greater the risk.

Most investigations focus on older adults. For example, a study of 2,505 men between the ages of 71 and 93 found that men with systolic pressures of 140 mm Hg or higher were 77% more likely to develop dementia than men with systolic pressures below 120 mm Hg. And a study that evaluated blood pressure and cognitive function in people between 18 and 46 and between 47 and 83 found that in both age groups high systolic and diastolic pressures were linked to cognitive decline over time.

## Treat blood pressure, prevent dementia?

The damage and disability done by dementia cannot be reversed. That makes prevention doubly important. Can treating high blood pressure help prevent dementia?

Yes. Here's some of the evidence:

- European scientists reported that long-term therapy for high blood pressure reduced the risk of dementia by 55%.
- One American study linked therapy to a 38% lower risk.
- Another reported that each year of therapy was associated with a 6% decline in the risk of dementia.

- A study of American men and women linked therapy to a 36% reduction in the risk of Alzheimer's disease. In that study, a type of medication called diuretics appeared to be the most beneficial medication.
- A team of investigators from Harvard and Boston University reported that six months of high blood pressure treatment actually improved blood flow to the brain.

### **Never too late**

It's good to know that blood pressure control can reduce the risk of cognitive dysfunction. But what about people who already have mild memory loss? Can treating high blood pressure help stave off further damage?

Perhaps. Italian scientists studied 80 patients with mild cognitive dysfunction. Over a two-year period, people who were given medications to treat high blood pressure were 80% less likely to progress to full-blown Alzheimer's than untreated patients. It's only one study, and a small one at that, but hopefully additional research will back up that finding.